NBII Southern Appalachian Information Node

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Background

The National Biological Information Infrastructure (NBII) <www.nbii.gov> is an electronic information network that provides access to biological data and information on our nation's plants, animals, and ecosystems. Data and information maintained by federal, state, and local government agencies; non-government organizations; and private-sector organizations are linked through the NBII gateway and made accessible to a variety of audiences including researchers, natural resource managers, decision-makers, educators, students, and other private citizens.

Implementation of the NBII is being accomplished through the development of nodes that serve as interconnected entry points to the NBII and the information held by partners. These nodes function as fully digital, distributed, and interactive systems that focus on developing, acquiring, and managing content on a defined subject area (thematic nodes) or a geographic region (regional nodes). The NBII Southern Appalachian Information Node (SAIN) is one of several regional nodes established in 2001.

Indian Creek

Jack in the Pulpit

SAIN is a unique source for integrated science including biological, physico-chemical, and socio-economic data and information created and coordinated in the region, combining multi-agency information and regional resources to improve productivity, resource management, and sustainable development through the Southern Appalachian Man and the Biosphere (SAMAB) connection and other partners.

About the Region

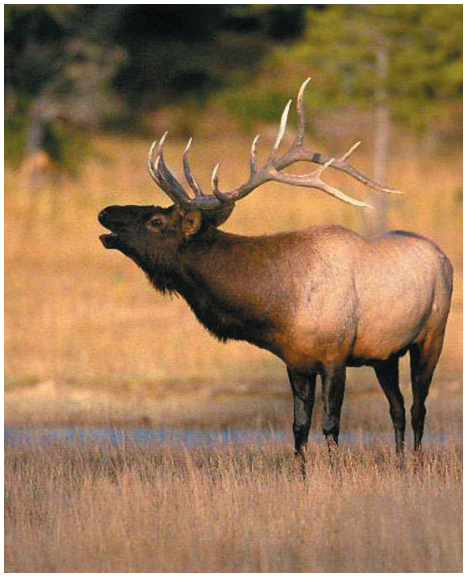
The Southern Appalachian region is one of the most biologically rich areas in the United States. From the Great Smoky Mountains National Park, which has the highest visitation rates in the U.S.park system, to land trusts, including such areas as the Tennessee River Gorge, the region provides a natural laboratory for scientifically understanding our nation's biological resources and to develop and test new approaches to better manage sensitive ecosystems for public use. This natural beauty lies in the Eastern United States and in the Sunbelt, where increasing human population density puts continuing pressure on our nation's natural resources.

A Closer Look at SAIN

SAIN is a leader in issues of ecosystems informatics and biodiversity information analysis and evaluation. SAIN also takes a national responsibility to build the integrated access system and clearinghouse to distribute NBII information.

SAIN facilitates:

- Using environmental information effectively in public- and private-sector decision making for resource management, economic development, land use and planning and policy development.
- Assessing and controlling invasive species in Southern Appalachia.
- Innovation in the dissemination of spatially enabled data and information over the Web.
- Building a coalition to get broad and deep regional participation in and support for node development.



Elk

- Providing to the NBII the computer metadata infrastructure necessary for the easy identification and access to NBII data and information across the entire system.
- Development of protocols for continued long-term monitoring of natural populations.
- Development of an educational consortium of elementary, middle, and high schools that will continue long-term monitoring.

SAIN's New Products, Accomplishments, and Objectives for FY2001

- An inventory of the biological data and information tools in the region with access through the NBII and regional clearinghouses.
- A biological component of the SAMAB Southern Appalachian Regional Information System (SARIS)— building on the existing map server capability, adding a linked Oracle database, and incorporating biological data from the Southern Appalachian Assessment and other sources.
- A new NBII-wide metadata infrastructure.
- Development of a pilot project with the partnership of the city of Walden, Nolan Elementary School, the Tennessee River Gorge Trust, and the Chattanooga-Hamilton County Regional Planning Agency, to integrate NBII protocols with long-term ecological monitoring and environmental awareness with city growth and planning.
- Development of curricula and educational opportunities provided by the University of Tennessee at Chattanooga (UTC), and other educational institutions of the region for biodiversity and ecosystems informatics.

Who Benefits From SAIN?

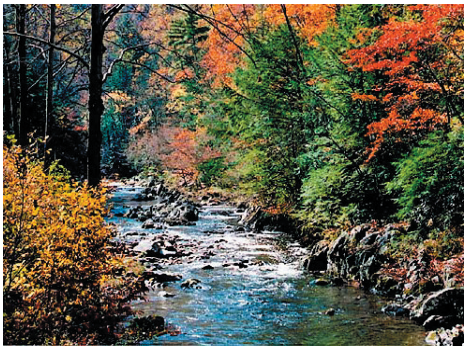
SAIN is a portal to a wealth of information that benefits researchers, resource managers, decision makers, planners, analysts, entrepreneurs, regulators, the general public, news media, and others.

SAIN will be used as a prototype with which to begin an outreach program to all geopolitical units in the region, including counties, cities, and other local entities, to integrate established protocols to build a multifaceted approach to answering long-term ecological questions.

More About SAIN

SAIN is developing protocols for continuous monitoring of biological populations so that the future generation of data will be NBII database-ready, will be replicable, and will add to an already growing database.

Our metadata infrastructure support includes the use of a highly automated software concept (Mercury) that is consortium-based and leverages the efforts of several agencies, with NASA as a major sponsor. The consortium reduces costs and development time, while introducing new features. Mercury emphasizes the use of the U.S. Geological Survey Biological Data Profile for the Federal Geographic Data Committee, Web, XML, and Z39.50 standards for easy migration to new technologies.



Little Pigeon River

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